OPERATING INSTRUCTIONS

JVC

COLOUR TELEVISION

AV-28WZ4EP
AV-28WZ4EPS
AV-32WZ4EP

ENGLISH

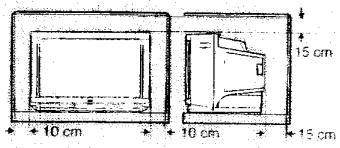
Instructions

Thank you for buying this JVC colour television.
To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:
TO ENSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. *Operate only from the power source specified (AC 220 – 240 V, 50 Hz) on the unit.*
2. *Avoid damaging the AC plug and power cord.*
3. *Avoid improper installation and never position the unit where good ventilation is unattainable. When installing this television, distance recommendations must be maintained between the floor and wall, as well as instalment in a tightly enclosed area or piece of furniture. Adhere to the minimum distance guidelines shown for safe operation.*



4. *Do not allow objects or liquid into the cabinet openings.*
5. *In the event of a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.*

When you don't use this TV set for a long period of time, be sure to disconnect the power plug from the AC socket.

Natural Vision

T-V LINK

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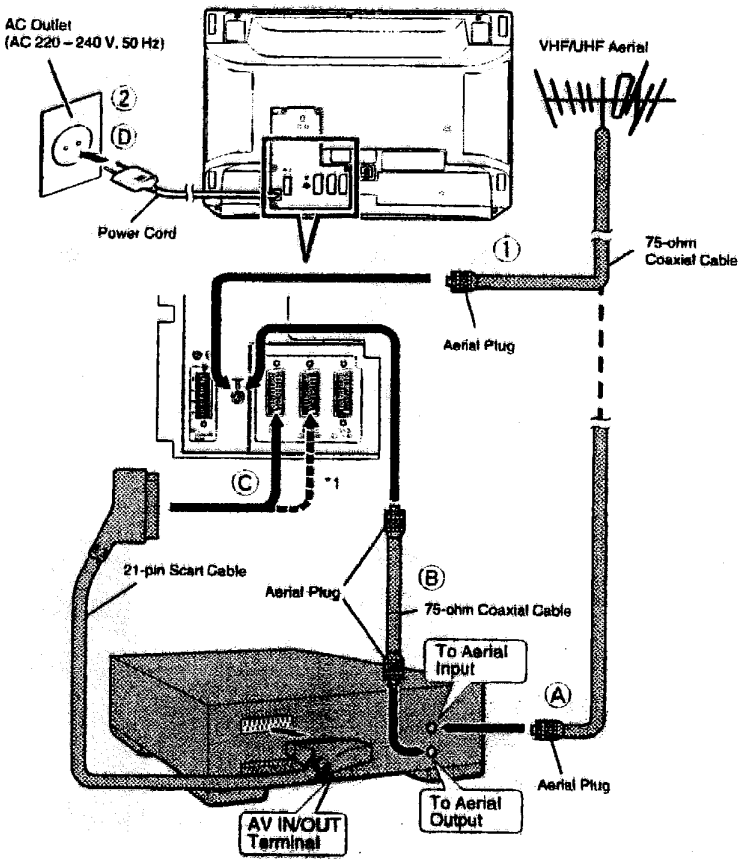
Jun.1999 No.51551

Preparation

1 Connecting the Aerial and VCR

If connecting a VCR, follow Ⓐ → Ⓑ → Ⓒ → Ⓓ.
If not connecting a VCR, follow ① → ②.



Notes:

- *For further details, refer to the manuals provided with the devices to be connected.*
- *The connecting cables are not provided.*
- *A video can be viewed from the VCR without performing Ⓒ. For details, refer to the VCR manual.*
- *The [redacted] shaded items are not provided.*
- *To connect additional external devices, please refer to page 30.*
- *To connect external speakers or audio system, please refer to page 31.*

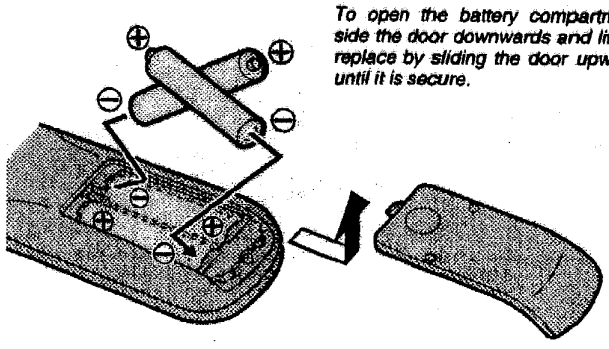
*1 This TV is T-V LINK compatible. To operate T-V LINK, a T-V LINK compatible VCR must be connected to the EXT-2 Terminal on the TV.

Notes:

- *For details about T-V LINK, refer to page 5.*
- *When a decoder is connected to a T-V LINK compatible VCR, set the Decoder (EXT-2) in the Features menu to ON. (See "Decoder (EXT-2)" on page 24.) Otherwise, you will not be able to view scrambled channels.*

2 Putting Batteries into the Remote Control

Use two AAA/R03 dry cell batteries.
Insert the batteries from the ⊖ end, making sure the ⊕ and ⊖ polarities are correct.



To open the battery compartment, side the door downwards and lift off, replace by sliding the door upwards until it is secure.

Notes:

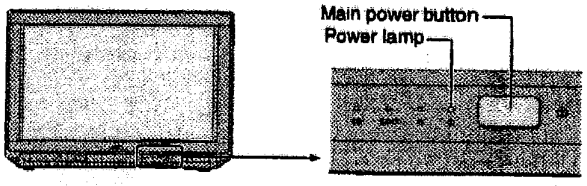
- *Follow the warnings printed on the batteries.*
- *Battery life is about six months to one year, depending on frequency of use.*
- *If the remote control doesn't work properly, replace the batteries.*
- *The batteries we supply are only for setting up and testing your TV, please replace them as soon as necessary.*
- *Always use good quality batteries.*

3 Initial Setting

You can automatically set up to 99 TV stations to PR channels PR 1 to PR 99 on this TV.

1 Press the Main power button.

The Power lamp lights red (power on), then green (TV on).

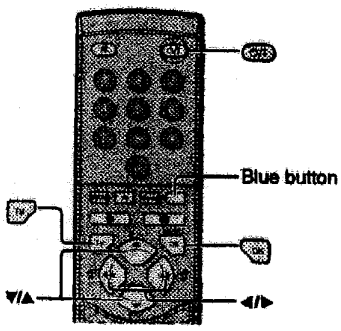


■ When the TV is first turned on, it enters the initial setting mode, and the JVC logo is displayed.

Notes:

- *If the power lamp stays red and does not change to green: Your TV is in the standby mode. Press (Standby) on the remote control to turn your TV on.*
- *The TV only enters the initial setting mode the first time it is switched on. If you want to change the language and programme settings after this, please refer to page 25.*

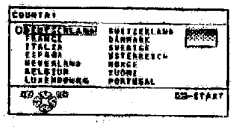
2 Press .



3 Press ▼/▲ to choose ENGLISH.

4 Press .

The language is set for the on-screen display description, and the Country menu appears.



5 Press ◄/►/▼/▲ to choose your country.

Notes:

- *If this TV identifies a broadcast station name, that station ID is also automatically registered in a PR channel.*
- *To cancel the Auto programming, press .*
- *To edit PR channels or allocate a station to the PR0 (AV) channel, refer to page 26 "Edit/Manual".*

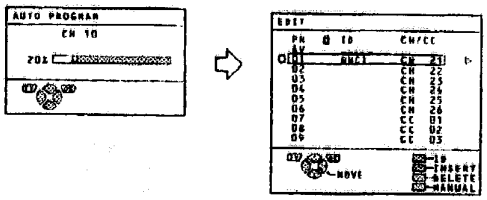
6 Press the blue button.

The Auto Programming starts.

The EDIT menu is displayed after the PR channels have been set.

(Continued to the next page)

Preparation

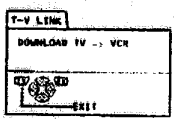


Note:
- *If a station you want to view is not set to a PR channel, manually set it using Edit menu. (See page 26.)*

When the ACI menu is displayed:
If your Cable TV station supports ACI (Automatic Channel Installation), the ACI menu is displayed. Please operate it according to the "ACI Operation" procedures at the bottom of this page. The channel is set quickly to the PR channel according to the order decided for all the channels.

7 **Press ⊛ to exit the Edit menu.**

The T-V LINK menu is displayed.



■ When a T-V LINK compatible VCR is connected

8 **Turn the VCR on.**

9 **Press ⊛.**

The transmission of PR channel data from the TV to the VCR begins. The display disappears once the data transmission ends.
This completes the Initial Setting procedure.

■ When a T-V LINK compatible VCR is not connected

8 **Press TV.**

The menu disappears.
This completes the Initial Settings procedure.

Notes:
- *For details about T-V LINK, refer to page 5.*
- *Depending on the type of VCR, the display may change once data transmission ends. In this case, refer to the VCR's instruction manual.*

ACI Operation

1 **Press ▼/▲ to choose your area.**

2 **Press ⊛.**

"ACI" is displayed in the AUTO PROGRAM menu and the ACI starts.
The EDIT menu is displayed after the channels have been set.

If "ACI ERROR" is displayed, press ⊛ to re-start the ACI.

- If "ACI ERROR" is displayed anyway, press ▶ and cancel ACI, then start the ordinary Auto Programming.

Note:
- *The ACI may not work correctly if you don't have good reception.*

No.51551

T-V LINK Functions

■ When a T-V LINK compatible VCR is connected to the EXT-2 Terminal on the TV, the procedures for setting up the VCR and viewing videos are simplified.
■ T-V LINK uses the following features:

	Function	Features	Remarks
①	Preset Download	Downloads the PR channel tuning information from the TV to the VCR.	•Starts automatically when the initial setting is complete or whenever the Auto Program or Edit/ Manual operations from the Install menu are performed. •This function can be operated via VCR operation.
②	DIRECT REC (WYSIWYR)	– What You See Is What You Record – You can record to VCR the images that you are currently viewing on TV by one-touch operation. For details, read the manual for your VCR.	•Operate via the VCR. (Operation via the TV is not possible.) "VCR IS RECORDING" is displayed.
③	TV Auto Power On	When the VCR starts playing, the TV automatically turns on and switches to the EXT-2 input mode.	•This function does not operate if your TV's main power is turned off. Set your TV's main power to on (standby mode).
	VCR Image View	When the VCR menu is operated, the TV automatically turns on and switches to EXT-2 input mode.	

■ To use T-V LINK:
- a T-V LINK compatible VCR is necessary.
- the VCR must be connected to the EXT-2 terminal on the TV by a fully wired SCART cable.

■ T-V LINK compatible VCRs:

In addition to all JVC VCRs that have the T-V LINK logo, any VCR that has one of the following logos are available for use:

"Q-LINK" (a trademark of Panasonic Corporation)
"Data Logic" (a trademark of Metz Corporation)
"Easy Link" (a trademark of Phillips Corporation)
"Megalogic" (a trademark of Grundig Corporation)
"SMARTLINK" (a trademark of Sony Corporation)

- These VCRs may support some or all of the features described above. For details, refer to the VCR Instruction Manual.

Note:
- *Not all VCRs support this type of data communication. Some may support certain features and not support others. For complete details, refer to the VCR Instruction Manual.*

■ When "FEATURE NOT AVAILABLE" is displayed:

If "FEATURE NOT AVAILABLE" is displayed after download execution, the download was not performed correctly. Confirm the following before re-executing download:
- that the VCR power is turned on.
- that the VCR is T-V LINK compatible.
- that the VCR is connected to the EXT-2 terminal.
- that the SCART cable is fully wired.

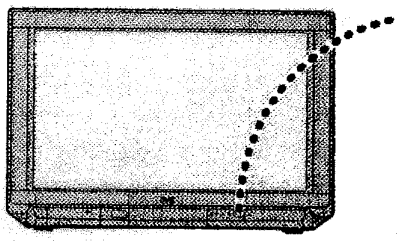
■ Operating Precautions for DIRECT REC:
- Generally, the VCR cannot record a channel that cannot be received properly by the VCR's tuner even though that channel could be viewed on the TV.
- In the following conditions, the VCR will stop recording if the TV is turned off, if the TV channel or input is switched, or if the menu is displayed on the TV:
  - When recording images from an external device connected to the EXT-1, EXT-3 or EXT-4 terminal.
  - When recording a channel after it has been unscrambled on a decoder.
  - When recording a channel by using the TV's output because that channel cannot be properly received on the VCR's tuner.

Note:
- *Some VCRs can record a channel by using the TV's output if that channel can be viewed on the TV, even though the channel cannot be received properly by the VCR's tuner.*
For details, refer to the VCR Instruction Manual.

ENGLISH

AV-32WZ4EP
AV-28WZ4EP
AV-28WZ4EPS

Basic Operation



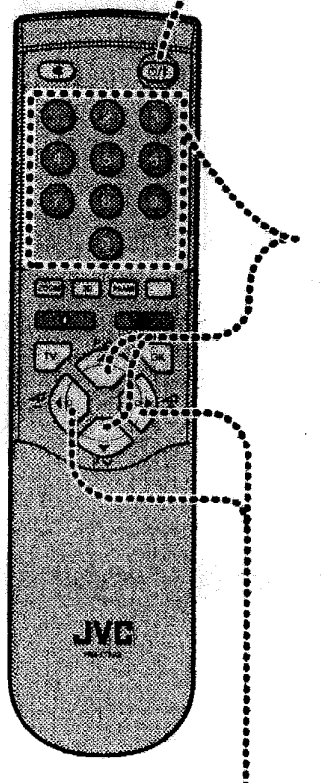
Turn the Main power on.

The Power lamp lights red and your TV is in the stanby mode.
- If the Power lamp lights green, the TV is already on.

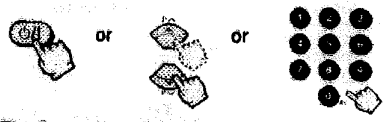
● To turn the Main power off:

The Power lamp goes off.
- To save energy, turn the main power off if not using the TV for a long period of time.

Operating with the Remote Control



1 Turn the TV on from standby mode.

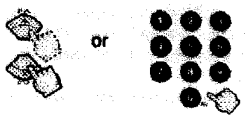


The Power lamp lights red to green.

● To turn the TV off:

The Power lamp changes from green to red. The TV enters standby mode.

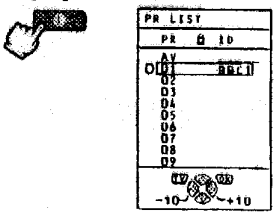
2 Choose a TV channel.



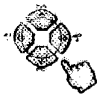
Example
- PR12 → press ❶ and ❷.
- PR6 → press ❻.

Use the PR List:

1 Display the PR List.



2 Choose a TV channel.



3 Press .

Notes:
- *For channels with Child Lock set, a 🔒 (Locked) mark is displayed next to the channel number.*
- *Using the PR List, the EXT terminal can also be chosen. Each EXT terminal is after the PR 99 channel.*
- *If you don't have a clear picture or no colour appears, change the colour system manually. See "Colour System" on page 16.*
- *If the picture is tilted, correct the picture. See "Picture Tilt" on page 17.*

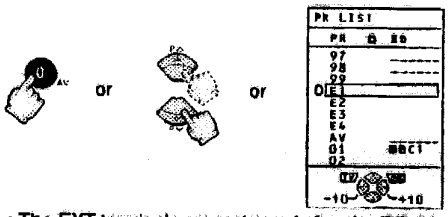
3 Adjust the volume.

The Volume indicator appears and the volume changes as –/+ are pressed.

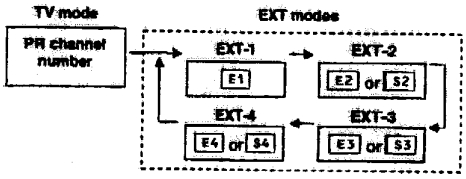
To listen to the sound using headphones, see "Headphone" on page 19.

Watch images from external devices.

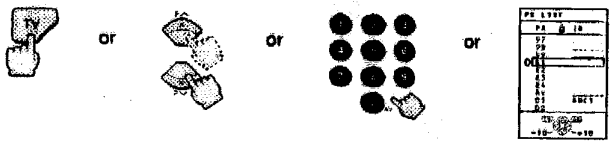
Choosing an EXT terminal or PR 0 (AV) channel.



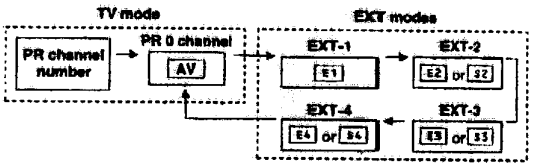
- The EXT terminals are registered after the PR 99 channel.
- Pressing button changes the choice as follows:



- To return to a TV channel:



- When the TV and VCR are connected only by the RF cable, the VCR RF channel* must be preset to the PR 0 (AV) channel to view VCR video. Choosing the PR 0 (AV) channel allows you to view images from VCR video.
  Pressing button changes the choice as follows:



Notes:

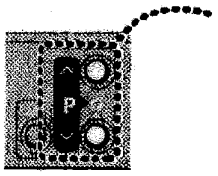
- *To use S-Video mode to view input from an S-VHS VCR, see "To choose S-VIDEO input" on page 22. When choosing EXT-2, EXT-3 or EXT-4 input terminals as S-VIDEO input, E2, E3 or E4 changes to S2, S3 or S4 in the display.*
- *If you don't have a clear picture or no colour appears, change the colour system manually. (See "Colour System" on page 16.)*
- *When choosing an EXT terminal with no input signal, the EXT number and ID become fixed on screen.*

Note:

- *The VCR RF channel is the channel that is sent as the RF signal from the VCR. To set the VCR RF channel to the PR 0 (AV) channel, refer to "Edit/Manual" on page 26. Also refer to the manual provided with the VCR.*

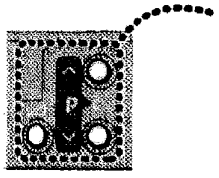
Operating with the Buttons on the TV

(Behind the front cover)



1 Turn the TV on from standby mode.

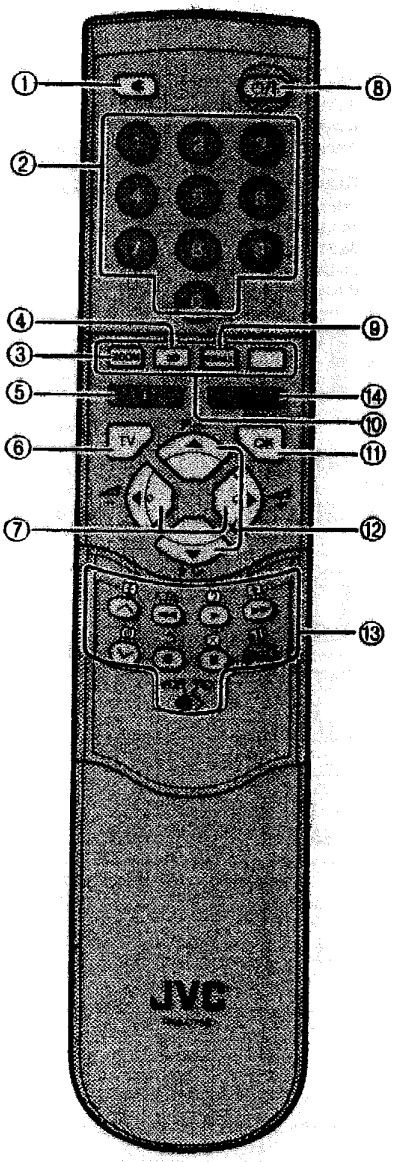
2 Choose a channel or an EXT terminal.

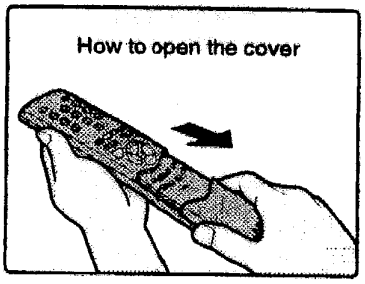


3 Adjust the volume.

1. **Press .**
   The volume level indicator appears.
2. **Press –/+ while the volume level indicator is displayed.**
   Indicator is displayed.

Remote Control Buttons and Functions

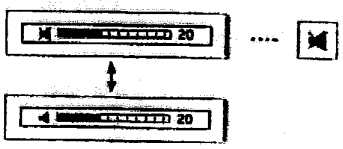




① Muting Button

You can turn the volume off instantly.

Pressing (Muting) changes the current volume to "0".



② Number Buttons

You can choose a channel by entering the channel number.

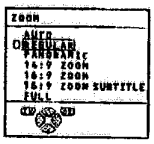
Example:
- PR 12 → press ● and ●.
- PR 6 → press ●.

■ You can choose an EXT terminal or PR 0 (AV) channel by pressing ● button repeatedly.

③ ZOOM Button

You can change the screen size. (See page 9.)

1 Press and press ▼/▲ to choose ZOOM mode.

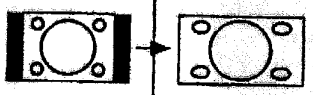
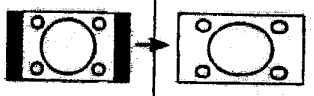


2 Press .

The picture expands and the choosed ZOOM mode is displayed in about 5 seconds.

Examples:
- *For details, see next page.*
- *You can preset a ZOOM mode for the normal picture. See "4:3 Auto Aspect" on page 17.*

ZOOM Button (continued)

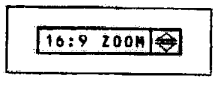
Mode	Recommended Picture (Aspect)	Display	Remarks
AUTO	Any picture format except Normal Picture (4:3 Aspect Ratio)	The picture will be automatically displayed in the optimum screen size.	• AUTO may not function properly with poor signal quality. In this case, choose an optimum ZOOM mode manually.
	Normal Picture (4:3 Aspect Ratio)	Displayed in accordance with the zoom mode set on the 4:3 Auto Aspect menu. (See page 17 for further details.)	
REGULAR	Normal Picture (4:3 Aspect Ratio)		• Use to view a normal picture (4:3 aspect ratio) unchanged.
PANORAMIC	Normal Picture (4:3 Aspect Ratio)		• This mode stretches the left and right sides of a normal picture to fill the screen, in a way that does not appear unnatural. • The top and bottom of the picture are slightly cut off.
14:9 ZOOM	Wide Picture (14:9 Aspect Ratio)		
16:9 ZOOM	Wide Picture (16:9 Aspect Ratio)		
16:9 ZOOM SUBTITLE	Wide Picture (16:9 Aspect Ratio) with Subtitles		
FULL	Normal Picture (4:3 Aspect Ratio)		• This mode uniformly stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the wide TV screen. • Use for pictures with a 16:9 aspect ratio that have been squeezed into a normal picture (4:3 aspect ratio), you can restore their original dimensions.

Note:
- *This television supports WSS (wide-screen signals). When broadcasts with WSS are received with the ZOOM mode set at AUTO, the most suitable ZOOM mode is automatically selected in accordance with the WSS.*

Adjusting the visible area of the picture.

If subtitles or the top (or bottom) of the picture are cut off, adjust the visible area of the picture manually.

1. **Press ZOOM.**
   The ZOOM menu appears.
2. **Press ▶ to display the ZOOM mode indication.**
   Indicator is displayed.



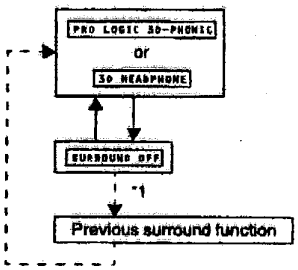
3. **Before it disappears, press ▼/▲ to adjust the visible area vertically.**

Notes:
- *You cannot adjust the visible area in AUTO, REGULAR and FULL mode.*
- *To return to the default position, display the ZOOM menu again and press ▶.*

Remote Control Buttons and Functions

④ 3D Button

Pressing 3D (3D) toggles the surround function as follows:

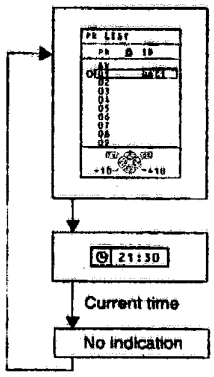


*1: If a surround function different from the Dolby Pro Logic 3D-Phonic or the 3D Headphone is activated before you press 3D (3D), that surround function is returned to.

- The Dolby Pro Logic 3D-Phonic will be activated when the headphones are not connected. For details on the Dolby Pro Logic 3D-Phonic, refer to page 19.
- The 3D Headphone will be activated when the headphones are connected. For details on the 3D Headphone, refer to page 21.
- The 3D lamp on the TV lights when the Dolby Pro Logic 3D-Phonic or 3D Headphone function is activated.

⑤ Information Button

Pressing INFO (Information) changes the display as follows.



About the PR List:
You can choose TV channels and EXT terminals operating the PR List. For details, see " Use the PR List " on page 6.

About the current time display:
This TV uses teletext data to set the current time.

- If the TV has not received a station that has teletext data since it was turned on, the time display is blank. To see the current time, choose a station that is broadcasting teletext data. As long as you do not turn off the TV, then even if you choose other stations, the time will still be displayed.
- When watching videos, the wrong current time is sometimes displayed.

Note:
- *When an EXT terminal with no input signal is chosen, the EXT number and ID become fixed on the screen.*

■ The INFO (Information) button is also used for the menu operation.
Please refer to "Menu Operation" on page 14 for more information.

⑥ TV Button

You can return to the TV mode instantly by pressing TV.

■ The TV button is also used for the menu operation.
Please refer to "Menu Operation" on page 14 for more information.

⑦ ◀/▶ Buttons

You can adjust the volume.

■ The Headphone volume cannot adjusted with the ◀/▶ buttons. If you want to adjust it, please refer to "Headphone" on page 19.
■ The ◀/▶ buttons are also used for the menu operation.
Please refer to "Menu Operation" on page 14 for more information.

⑧ Standby Button

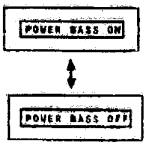
Pressing ⏻ (Standby) button turns the TV on or off.

- When the TV is turned on, the power lamp changes from red to green.

⑨ P.BASS (power bass) Button

You can enjoy richer and fuller bass sound.

Pressing P.BASS (Power Bass) turns the Power Bass on or off.



Remote Control Buttons and Functions

10 Colour Buttons

The colour buttons are used for the teletext operations or the menu operations. Please refer to "Teletext Control Buttons and VCR/TEXT Switch" on page 12 or "Menu operation" on page 14 for more information.

11 OK Button

The button is used for menu operation.
Please refer to "Menu Operation" on page 14 for more information.

12 ▼/▲ Buttons

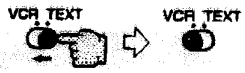
You can choose a channel by pressing the ▼/▲ buttons.

■ The ▼/▲ buttons are also used for the menu operation. Please refer to "Menu Operation" on page 14 for more information.

13 VCR Control Buttons and VCR/TEXT Switch

You can control your JVC VCR using the VCR Control buttons.

1 Set the VCR/TEXT Switch to the VCR side.



2 Press a VCR control button to control your JVC VCR.

Notes:

- *For details on the VCR Control buttons, see the VCR manual.*
- *Depending on your VCR, the remote control may not operate perfectly, and may not even control the VCR at all.*

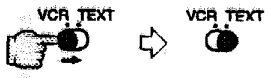
10 13 14 Teletext Control Buttons and VCR/TEXT Switch

■ Basic operation

You can view three types of teletext broadcasts on the TV; Fastext, TOP and WST.

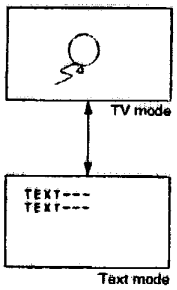
1 Choose a channel with a teletext broadcast.

2 Set the VCR/TEXT switch to the TEXT side.

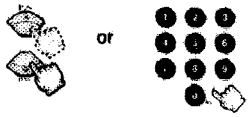


3 Display the teletext.

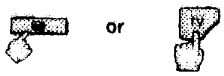
Pressing (Text) change the mode as follows:



4 Choose a teletext page.



● To return to the TV mode:



Notes:

- *If you have trouble receiving teletext broadcasts, consult your local dealer or the teletext station.*
- *Category names of teletext pages may appear instead of page numbers.*
- *In Text mode, ZOOM mode is fixed to FULL mode.*
- *None of the Menu operations are possible when viewing a teletext programme.*

■ Using the List Mode

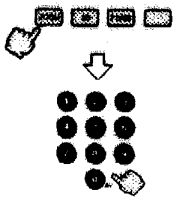
You can store the numbers of your favourite teletext pages and call them up quickly using the colour buttons.

To store the page numbers

1 Engage the List mode.

Stored page numbers are displayed at the bottom of the screen.

2 Choose the position, then enter the page number.



3 Press (Store) and hold on.

The four page numbers blink white to indicate that they are stored in memory.

To call up a stored page

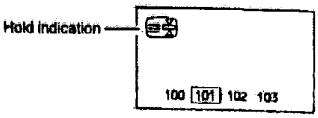
1 Engage the List mode.

To cancel the List mode:

2 Press a colour button to which a page has been assigned.

■ Hold

You can hold a teletext page on the screen for as long as you want, even while several other teletext pages are being received.



To cancel the hold:

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■ Sub Page

Some teletext pages include sub-pages that are automatically displayed. You can hold any sub-page, or view it at any time.

1 Display the sub-page list.

Sub-page numbers are displayed at the left of the screen.

Colour*	Meaning of sub-page number
Yellow	Currently being displayed.
White	Can be displayed.
Blue or Red	Cannot be displayed and it is not sent.

*: Background color of the sub-page number.

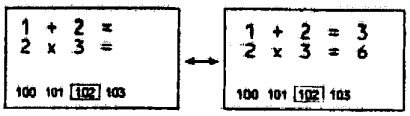
2 Choose a sub-page.

● *To cancel sub-page:*

■ Reveal

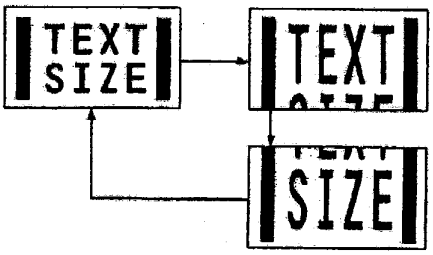
Some teletext pages include hidden text (such as answers to a quiz).

Each time you press (Reveal), text is hidden or revealed.



■ Size

You can double the height of the teletext display.



■ Index

You can return to the index page instantly.

Fastext/TOP/WST:
Returns to page 100 or a previously specified page.

List mode:
Returns to the page number displayed in the lower left area of the screen.

■ Cancel

You can search for a teletext page while watching TV.

1 Choose a teletext page.

The TV searches for a teletext page.

2 Cancel teletext mode temporarily.

The TV programme appears.
When the TV finds the teletext page, its page number appears in the upper left of the screen.

3 Return to a teletext page when the page number is on the screen.

ENGLISH

Menu Operation

1 Display MENU.

The MENU (main menu) appears.

2 Choose an item.

3 Display the sub-menu.

4 Choose an Sub-menu item.

5 Change the setting.

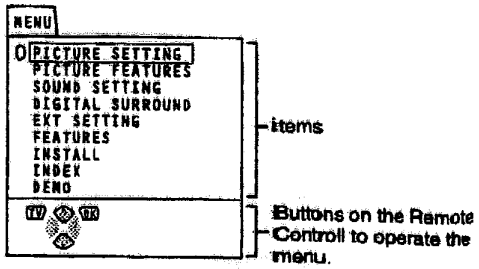
- Depending on the Sub-menu display, the following buttons can be used.

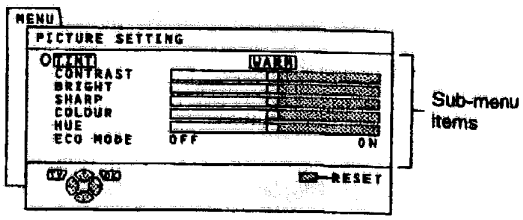
6 Complete the setting.

The menu disappears.

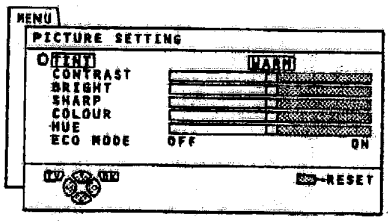
To return to the previous menu or exit the MENU.

To exit the MENU instantly.





Picture Setting



1 Display MENU.

2 Choose PICTURE SETTING.

3 Display the Picture Setting menu.

Tint

You can choose one of three Tint modes to adjust the picture settings automatically.

1 Press ▼/▲ to choose TINT.

2 Press ◀/▶ to choose a mode.

COOL:
A cool white colour base with a boost in the colour and contrast levels that creates a more vivid picture.

WARM:
A warm orange/red colour base that creates the appropriate colour and contrast levels for watching films.

NORMAL:
A normal white colour base with normal colour and contrast levels.

3 Press OK.
This completes the setting.

Picture Adjustment

You can adjust the picture to your liking.

1 Press ▼/▲ to choose an item.

2 Press ◀/▶ to adjust the setting.

◀	Item	▶
Lower	**CONTRAST** (picture contrast)	Higher
Darker	**BRIGHT** (picture brightness)	Brighter
Softer	**SHARP** (picture sharpness)	Sharper
Lighter	**COLOUR** (picture colour)	Deeper
Reddish	**HUE** (picture hue)	Greenish

Note:
- *You can adjust the HUE (picture hue) only when the colour system is NTSC 3.58 or NTSC 4.43.*

- To return to the default settings, press the blue button.

3 Press OK.
This completes the setting.

Eco Mode

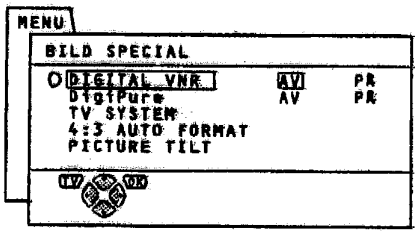
When you set the Eco Mode to ON, the screen contrast is automatically adjusted to a setting suitable for the brightness of your room.
This reduces eye strain and the power consumption of the TV.

1 Press ▼/▲ to choose ECO MODE.

2 Press ◀/▶ to choose ON.
- To cancel the Eco Mode, choose OFF.

3 Press OK.
This completes the setting.
- If you set the Eco Mode to ON, the Eco lamp lights.

Picture Features



1 **Display MENU.**

2 **Choose PICTURE FEATURES.**

3 **Display the Picture Features menu.**

Digital VNR

When you set the Digital VNR to ON, you can reduce the noise on the screen so improving picture quality further.

1 **Press ▼/▲ to choose DIGITAL VNR.**

2 **Press ◀/▶ to choose ON.**
• To cancel the Digital VNR, choose OFF.

3 **Press .**
This completes the setting.

DigiPure

When the DigiPure is set to ON, optimum edge compensation applies to each portion of the same picture through digital edge compensation. Thus, Clear and natural looking images are obtained.

1 **Press ▼/▲ to choose DigiPure.**

2 **Press ◀/▶ to choose ON.**
• To cancel the DigiPure, choose OFF.

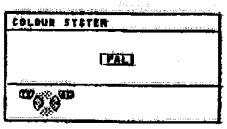
3 **Press .**
This completes the setting.

Notes:
- *Set the DigiPure to ON normally.*
- *The DigiPure function can also be set to ON and OFF by pressing ◁ (Volume) button on the TV for 5 seconds or more.*

Colour System

The colour system is automatically chosen, but if the picture is not clear or no colour appears, choose the colour system manually.

1 **Press ▼/▲ to choose COLOUR SYSTEM. Then Press .**



2 **Press ◀/▶ to choose the appropriate colour system.**

PAL:
PAL system.
SECAM:
SECAM system.
NTSC3.58:
NTSC 3.58 MHz system.
NTSC4.43:
NTSC 4.43 MHz system.
AUTO:
Automatic colour system selection.

Notes:
- *The AUTO may not function properly with poor signal quality. If the picture is abnormal in AUTO mode, choose another colour system manually.*
- *When in the TV mode (PR 1 to PR 99), you cannot choose AUTO, NTSC 3.58 or NTSC 4.43.*
- *When in the TV mode (PR 0), you cannot choose NTSC 3.58 or NTSC 4.43.*

3 **Press .**
This completes the setting.

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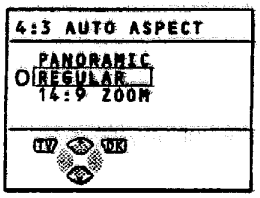
4:3 Auto Aspect

You can preset one of three ZOOM modes, REGULAR, PANORAMIC or 14:9 ZOOM, as the ZOOM mode for the normal picture (4:3 aspect ratio).

1. **Press ▼/▲ to choose 4:3 AUTO ASPECT. Then press ☜.**
   The 4:3 AUTO ASPECT menu appears.



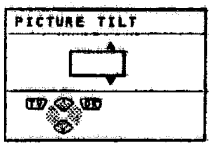
2. **Press ▼/▲ to choose a ZOOM mode.**

3. **Press ☜.**
   This completes the setting.

Picture Tilt

There are cases where the effects of the magnetic pull from the earth may make the picture tilt. If this happens, correct the picture as follows.

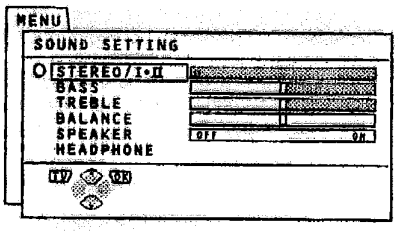
1. **Press ▼/▲ to choose PICTURE TILT. Then press ☜.**
   The PICTURE TILT menu appears.



2. **Press ▼/▲ until the picture becomes horizontal.**

3. **Press ☜.**
   The correction is complete.

Sound Setting



1 Display MENU.

2 Choose SOUND SETTING.

3 Display the Sound Setting menu.

Stereo / I • II

You can choose Multi Sound mode for stereo broadcast programmes and bilingual programmes.

Note:
- *Multi Sound has no effect on programmes other than A2 (B/G) or NICAM (B/G, L) broadcast programmes.*

1 Press ▼/▲ to choose STEREO / I • II.

Notes:
- *The Multi Sound mode display is different from the broadcast programme.*
- *The Multi Sound function does not work in the EXT modes. And the STEREO / I•II does not appear in SOUND SETTING menu.*

2 Press ◀/▶ to choose a Multi Sound mode.

CO : Stereo sound
I : Bilingual I (Sub I)
II : Bilingual II (Sub II)
O : Normal sound

3 Press OK.

This completes the setting.

Note:
- *When you display the current PR channel number, the current Multi Sound mode appears for approximately 3 seconds.*

Sound Adjustment

You can adjust the sound to your liking.

1 Press ▼/▲ to choose an item.

Note:
- *When DOLBY PRO LOGIC or PRO LOGIC 3D-PHONIC is chosen in the DIGITAL SURROUND menu, "BALANCE" does not appear. If you want to adjust the sound balance, see pages 29 and 32.*

2 Press ◀/▶ to adjust it.

◀	Item	▶
Weaker	**BASS**	Stronger
Weaker	**TREBLE**	Stronger
Left	**BALANCE**	Right

3 Press OK.

This completes the settings.

Speaker

It is possible to prevent the sound being emitted from the TV speakers. This function should only be used to emit the sound from an audio system connected to the television as a substitute for the TV speakers.

When you use your audio system instead of the TV speakers:
Please refer to "Connecting an Audio System" on page 32.

To output the sound from TV speakers:

1 Press ▼/▲ to choose SPEAKER.

2 Press ◀/▶ to choose ON.

3 Press OK.

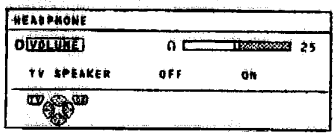
This completes the setting.

Headphone

You need to use the headphone menu in order to adjust the volume of the headphones. Use of the headphone menu also makes it possible to select whether to emit sound from the TV speakers when using the headphones.

1 Press ▼/▲ to choose HEADPHONE. Then press OK.

The Headphone menu appears.



2 Change the setting.

To adjust the volume of the headphones:

1 Press ▼/▲ to choose VOLUME.

2 Press ◀/▶ to adjust the volume.

To prevent the sound being emitted from the TV speakers when the headphones are in use.

1 Press ▼/▲ to choose TV SPEAKER.

2 Press ◀/▶ to choose OFF.

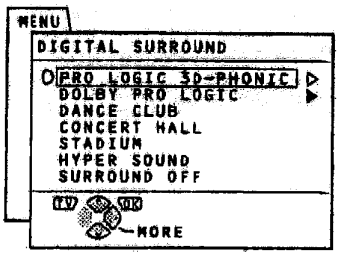
- The sound will be emitted from the TV speakers even when listening on the headphones if the TV SPEAKER setting is at ON.

Note:
- *The sound output from AUDIO OUT terminals can not be turned off.*

3 Press OK.

The completes the settings.

Digital Surround



1 Display MENU.

2 Choose DIGITAL SURROUND.

3 Display the Digital Surround menu.

Note:
- *The Headphone Surround menu appears when the headphones are connected.*

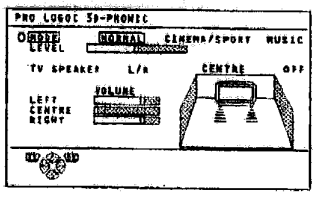
Dolby Pro Logic 3D-Phonic

You can enjoy the atmosphere of Dolby Surround programmes without external speakers.

Notes:
- *This function is only available for Dolby Surround encoded programmes.*
- *The 3D lamp lights while this function is operating.*

1 Press ▼/▲ to choose PRO LOGIC 3D-PHONIC. Then press ▶.

The PRO LOGIC 3D-PHONIC menu appears.



- To cancel the surround function, choose SURROUND OFF from the Digital Surround menu and then press OK.

Digital Surround

2 Press ▼/▲ to choose MODE and ◀/▶ to choose a mode.

NORMAL:
For normal programmes

CINEMA/SPORT:
For cinema and sports programmes

MUSIC:
For music programmes

Adjusting the effect level:

▼ Press ▼/▲ to choose LEVEL and ◀/▶ to adjust the effect levels.

Adjusting the speaker volume:

▼ Press ▼/▲ to choose a speaker. Then, press ◀/▶ to adjust the volume level.

Note:
• You can not adjust the volume level of CENTRE when you set the TV SPEAKER to L/R or OFF.

TV SPEAKER:
Only change this setting when you use your audio system instead of TV speakers. For details, refer to "Connecting an Audio System" on page 32.

Note:
• When external speakers are not connected, leave the TV SPEAKER setting as L/R. Otherwise, the sound may not function properly or become mono.

▼ Press ▼/▲ to choose TV SPEAKER. Then, press ◀/▶ to choose a TV Speaker mode.

L/R:
Use when you do not use your audio system.

CENTRE:
Use when you use your audio system.
TV speakers will work as the centre speakers when you enjoy the Dolby Pro Logic 3D-Phonic.
This method enhances spoken dialogue.

OFF:
Use when you use your audio system.
TV speakers will not sound.
This mode does not use a centre speaker.

3 Press OK.

- To cancel the surround function, choose SURROUND OFF from the Digital Surround menu and then press OK.

Note:
• When headphones are connected to the TV, the 3D Headphone function operates automatically.

▼ Using the 3D button:
You can turn on Dolby Pro Logic 3D-Phonic with one touch. For details, refer to "④ 3D Button" on page 10.

Dolby Pro Logic

You can enjoy Dolby Pro Logic* surround sound with additional surround speakers.
For connecting surround speakers, refer to "Connecting Surround Speakers" on page 32.

Notes:
- *This function will not work correctly if you do not connect the additional surround speakers.*
- *You can connect both your audio system and additional surround speakers, and enjoy Dolby Pro Logic surround sound. For details, refer to "Connecting both Your Audio System and Surround Speakers" on page 33.*
- *This function only available for Dolby Surround encoded programmes.*
- *You cannot enjoy Dolby Pro Logic surround sound with headphones.*

* Manufactured under license from Dolby Laboratories Licensing Corporation.
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1 Press ▼/▲ to choose DOLBY PRO LOGIC.

2 Press OK.

- To cancel the surround function, choose SURROUND OFF from the Digital Surround menu and then press OK.

Note:
• When headphones are connected to the TV, the 3D Headphone function operates automatically.

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Other Surround Functions

You can enjoy enhanced sound by choosing one of four Digital Surround modes.

1 Press ▼/▲ to choose a mode.

DANCE CLUB:
Creates a dance club atmosphere.
CONCERT HALL:
Creates a concert hall atmosphere.
STADIUM:
Creates a stadium atmosphere.
HYPER SOUND:
Enhances mono sound to create a stereo sound feel.

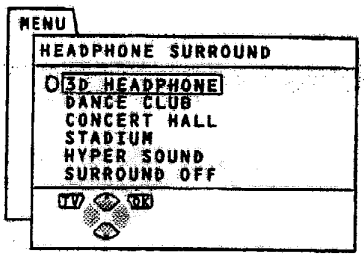
2 Press .

- To cancel the surround function, choose SURROUND OFF from the Digital Surround menu and then press .

Notes:
- *Digital surround functions other than Hyper Sound do not work well for programmes in mono.*
- *Hyper Sound only works for programmes in mono. It does not work well for programmes in stereo.*
- *If the headphones are connected while in one of the above modes, one of Headphone Surround functions will activate automatically.*

ENGLISH

Headphone Surround



Condition:
- *You have to connect the headphones to the TV before you display the MENU.*

1 Display MENU.

2 Choose HEADPHONE SURROUND.

3 Display the Headphone Surround menu.

Headphone Surround

You can enjoy enhanced sound while using headphones by choosing one of five Headphone Surround modes.

1 Press ▼/▲ to choose a mode.

3D HEADPHONE:
Creates a broad, atmospheric sound.
DANCE CLUB:
Creates a dance club atmosphere.
CONCERT HALL:
Creates a concert hall atmosphere.
STADIUM:
Creates a stadium atmosphere.
HYPER SOUND:
Enhances mono sound to create a stereo sound feel.

2 Press .

- To cancel the surround function, choose SURROUND OFF from the Headphone Surround menu and then press .

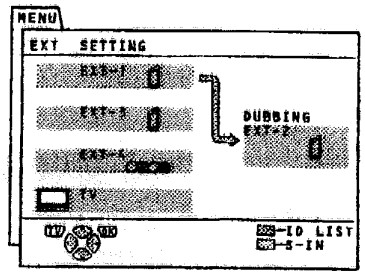
Using the 3D button:

You can turn on 3D Headphone with one touch. For details, refer to "④ 3D Button" on page 10.

Note:
- *The 3D lamp lights while the 3D Headphone function is operating.*

AV-32WZ4EP
AV-28WZ4EP
AV-28WZ4EPS

EXT Setting



1 **Display MENU.**

2 **Choose EXT SETTING.**

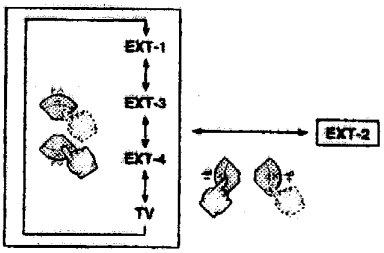
3 **Display the EXT Setting menu.**

EXT Setting

You can choose S-VIDEO or normal input for EXT-2, EXT-3 and EXT-4 terminals, and you can give an EXT ID to each EXT input terminal.

■ To choose S-VIDEO input

1 **Press ◀/▶/▼/▲ to choose an EXT terminal.**



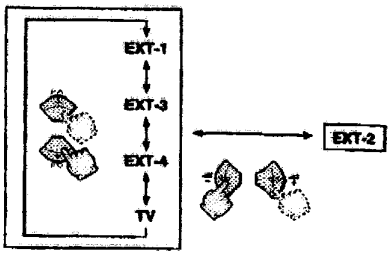
2 **Press the yellow button.**
The S-VIDEO input indication appears.

- To choose normal input, press the yellow button again.

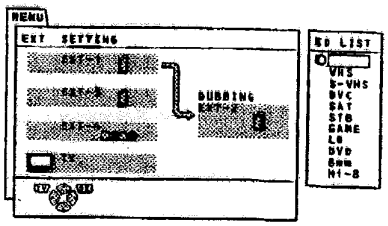
3 **Press .**
This completes the setting.

■ To give an EXT ID

1 **Press ◀/▶/▼/▲ to choose an EXT terminal.**



2 **Press the blue button.**
The ID LIST appears.



3 **Press ▼/▲ to choose a EXT ID.**

Note:
- *To erase the EXT ID, choose a blank space.*

4 **Press .**
The EXT ID is set to the EXT terminal.

5 **Press .**
This completes the setting.

Dubbing

You can choose output to a VCR or other device connected to the EXT-2 terminal. Note that you cannot output from the EXT-2 terminal when the TV is turned off.

Note:
- *RGB signals from TV games and Teletext screens cannot be output from EXT-2 terminal.*

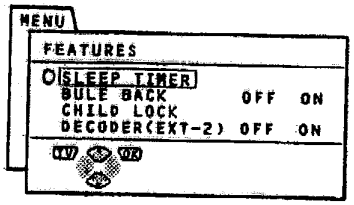
1 **Press ◀/▶ to choose EXT-2.**

2 **Press ▼/▲ to choose the output.**

If you choose TV:
The sound and picture of the currently chosen channel is output to EXT-2 and this output can be recorded on a VCR connected to the EXT-2 terminal while watching a video input from other terminals.

3 **Press .**
This completes the setting.

Features



1 Display MENU.

2 Choose FEATURES.

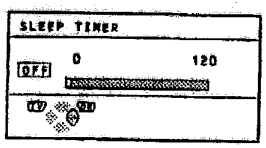
3 Display the Features menu.

Sleep Timer

You can set the TV to automatically turn off after a specified period of time.

Note:
• The Sleep Timer does not turn off the Main power.

1 Press ▼/▲ to choose SLEEP TIMER. Then press .
The Sleep Timer menu appears.



2 Press ◀/▶ to choose a period of time.
You can set the period of time a maximum of 120 minutes in 10 minute increments.

3 Press .
The Sleep Timer lamp lights if you set the Sleep Timer.

To display the remaining time:
Do step 1 to display the Sleep Timer menu, and press after checking the remaining time.

To cancel the Sleep Timer:
Do step 1 to display the Sleep Timer menu.
Press ◀) choose "OFF", and then press .
• The Sleep Timer lamp goes out.

Note:
• One minute before the Sleep Timer turns off the TV, "GOOD NIGHT!" appears.

Blue Back

You can set the TV to automatically change to a blue screen and mute the sound when a weak signal or no signal is received or when there is no input from an external device.

1 Press ▼/▲ to choose BLUE BACK.

2 Press ◀/▶ to choose ON.
• To cancel the Blue Back, choose OFF.

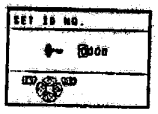
3 Press .
This completes the setting.

Child Lock

You can lock some channels to prevent your children from watching them.

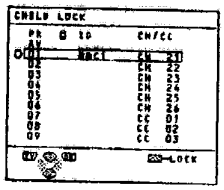
■ To set the CHILD LOCK

1 Press ▼/▲ to choose CHILD LOCK. Then press (number 0).
The Set ID No. menu appears.



2 Enter the ID number.
1. Press ▼/▲ to choose a number.
2. Press ◀/▶ to move the cursor.

3 Press .
The Child Lock menu appears.



ENGLISH

4 Press ▼/▲ to choose a channel, then press the blue button.

The 🔒 (locked) mark appears, and the chosen channel is locked.

- To cancel the Child Lock, press the blue button again.
- Repeat step 4 to lock all channels which you want to lock.

5 Press OK.

This completes the setting.

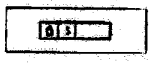
Notes:

- *You cannot choose a locked channel using the ▼/▲ buttons on the remote control nor the P ∨/∧ buttons on the TV.*
- *Even if a locked channel is displayed, the programme cannot be watched.*

■ To watch a locked channel

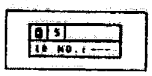
1 Press the number buttons to choose a locked channel.

The 🔒 (locked) mark appears.



2 Press INFO (Information).

The ID No. input menu appears.



3 Press the number buttons to enter the ID number.

The locked channel can now be watched.

If you forget the ID number:
Do steps 1 of "To set the Child Lock". After confirming the ID number, press TV to exit the menu.

Decoder (EXT-2)

When you connect a Decoder to a T-V LINK compatible VCR, you have to set the Decoder (EXT-2) to ON for watching scrambled channels.

1 Choose a scrambled channel.

The scrambled picture appears.

- *If the picture is unscrambled you don't need to change the Decoder (EXT-2) setting.*

2 Press OK to display MENU. Then Press ▼/▲ to choose FEATURES.

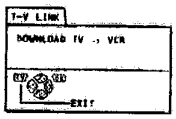
3 Press OK to display the Features menu.

4 Press ▼/▲ to choose DECODER (EXT-2).

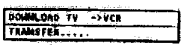
5 Press ◀/▶ to choose ON.

6 Press OK.

The T-V LINK menu appears.



7 Press OK.



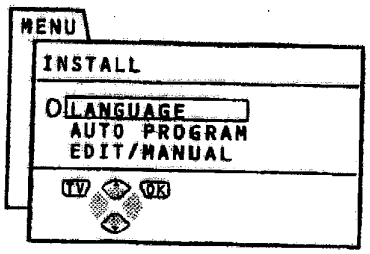
The translation of channel data from the TV to the VCR begins. The display disappears once the data transmission ends.

- Repeat steps 1 to 7 watch a different channel using the decoder.

Note:

- *Depending on the type of VCR, the display may change once data transmission ends. In this case, refer to the VCR's manual.*

Install



1 Display MENU

2 Choose INSTALL.

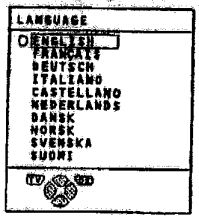
3 Display the Install menu.

Language

You can choose one of 10 languages for the on-screen display.

1 Press ▼/▲ to choose LANGUAGE.

The Language menu appears.



2 Press ▼/▲ to choose a language.

3 Press OK.

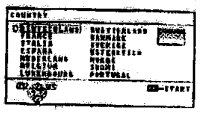
This completes the setting.

Auto Program

You can automatically allocate up to 99 stations to the PR channels (PR 1 to PR 99) on this TV.

1 Press ▼/▲ to choose AUTO PROGRAM, then press OK.

The Country menu appears.



2 Press ◀/▶/▼/▲ to choose your country.

3 Press the blue button.

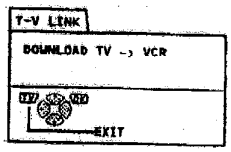
The Auto Programming starts. The Edit menu appears after the PR channels have been set.

If the ACI menu is displayed:
If your Cable TV station supports ACI (Automatic Channel Installation), the ACI menu is displayed. Please operate it according to "ACI Operation" procedures at the bottom of page 4. The channel is set quickly to the PR channel according to the order decided for all the channels.

Notes:
- *If the TV identifies a broadcast station name, that station ID is also automatically registered in a PR channel.*
- *To cancel the Auto programming, press TV.*
- *If a station you want to view is not set to a PR channel, manually set it using the Edit menu. (See page 28.)*
- *To edit PR channels or set a station to PR 0 (AV) channel, refer to page 26 "Edit/Manual".*

4 Press OK.

This completes the procedure and the T-V LINK menu appears.



When a T-V LINK compatible VCR is connected:
You can transmit the latest PR channel data from the TV to the VCR. Carry out the procedure described in "Downloading the PR channel data to the VCR" on page 28.

When a T-V LINK compatible VCR is not connected:
You cannot transmit the latest PR channel data from the TV to the VCR.
Press TV to exit the T-V LINK menu.

ENGLISH

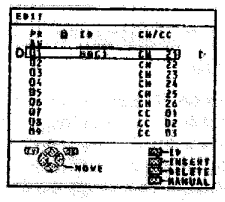
AV-32WZ4EP
AV-28WZ4EP
AV-28WZ4EPS

Edit/Manual

You can change PR channel settings.
- You can delete an unwanted station from a PR channel,
- You can change the PR channel number of a station,
- You can add station IDs to PR channels,
- You can insert a new station to a PR channel, or
- You can manually set the desired station to a PR channel.

1 Press ▼/▲ to choose EDIT/MANUAL.

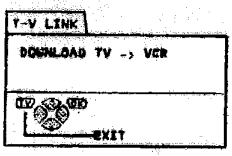
The Edit menu appears.



2 Use any of the following procedures to edit the PR channel setting.

3 Press .

This completes the procedure and the T-V LINK menu appears.

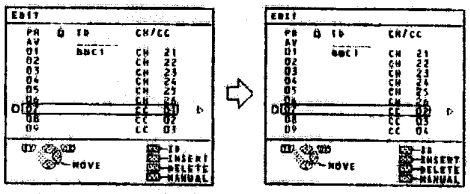


When a T-V LINK compatible VCR is connected:
You can transmit the latest PR channel data from the TV to the VCR. Carry out the procedure described in "Downloading the PR channel data to the VCR" on page 28.

When a T-V LINK compatible VCR is not connected:
You cannot transmit the latest PR channel data from the TV to the VCR. Press to exit the T-V LINK menu.

■ Deleting a station

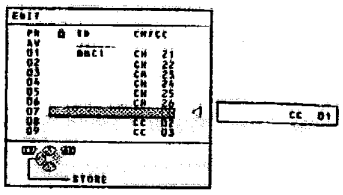
1 Press ▼/▲ to choose the station you want to delete then press the yellow button.



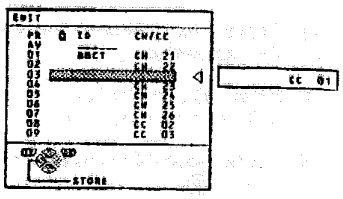
Note:
- *If you delete a station from a PR channel, the following stations PR channel number move back one.*

■ Changing the PR channel number

1 Press ▼/▲ to choose the station, then press ▶.



2 Press ▼/▲ to move the station to the desired PR channel number.

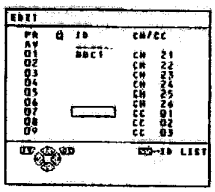


- To cancel the operation, press (Information).

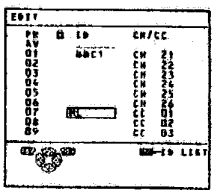
3 Press ◀.

■ Adding a Station ID

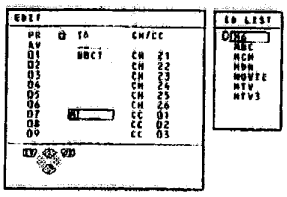
1 Press ▼/▲ to choose the station, then press the red button.



2 Press ▼/▲ to choose the first character of the desired Station ID.



3 Press the blue button.
The ID List menu appears.



4 Press ▼/▲ to choose the station ID.

- To cancel the operation, press (Information).

5 Press .

Adding a Station ID name of your own:
Do the following procedure in place of "Adding a Station ID".

1 Press ▼/▲ to choose the station, then press the red button.

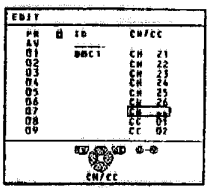
2 Press ▼/▲ to choose a character, then press ◀/▶ to move the cursor.

3 Repeat step 2 to complete the Station ID, then press .

■ Inserting a new station

If you want to insert French stations to the PR channels:
You have to set the Country setting to FRANCE before inserting French stations to the PR channels.
If your Country setting is not FRANCE, change the Country setting to FRANCE. To change the Country Setting, refer to "Changing the Country Setting" on page 28.

1 Press ▼/▲ to choose the PR channel, then press the green button.



2 Press ▼/▲ to choose CC or CH

CH: to insert the terrestrial broadcast stations
CC: to insert the cable TV stations

To set a French station:
Choose CH1, CH2, CC1 or CC2.

- To cancel the operation, press (Information).

Note:
- *For details on the relationship between the displayed CH/CC number and the actual channel number, see the Channel Table on page 34.*

3 Press the number buttons to enter the channel number.
The channel number blinks. When the channel setting is complete, the blinking goes off.

- To enter a one-digit channel number, enter the number and press .

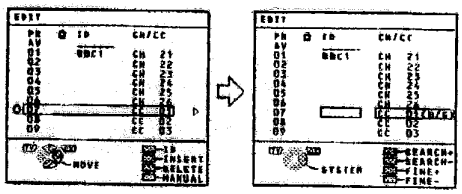
Note:
- *When you insert a station, the station preset to PR99 is deleted.*

■ Setting a station to a PR channel manually

If you want to set French stations to the PR channels:
You have to set the Country setting to FRANCE before setting French stations to the PR channels.
If your Country setting is not FRANCE, change the Country setting to FRANCE. To change the Country Setting, refer to "Changing the Country Setting" on page 28.

1 Press ▼/▲ to choose a PR channel number, then press the blue button.

Note:
- *PR channel number "AV" appears on the screen as PR 0 channel. We recommend setting this PR channel to the VCR RF channel from a VCR connected to the aerial socket.*



2 Press the green or red button to search for a station.
Scanning stops when the TV finds a station.
To continue searching, press the red or green button again and repeat until the station you want appears.

CH: The terrestrial broadcast stations
CC: The cable TV stations

If reception is poor:
Press the blue or yellow button to fine-tune the station.

If reception is not correct:
Press ▶ to choose the correct broadcast system.

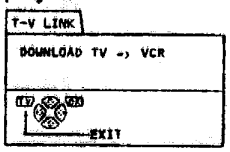
Note:
- *For details on the relationship between the displayed CH/CC number and the actual channel number, see the Channel Table on page 34.*

3 Press .

■ Downloading the PR channel data to the VCR.

You can transmit the latest PR channel data from the TV to the VCR with T-V LINK.

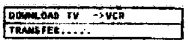
1 Make sure that the T-V LINK menu is displayed.



Notes:
- *You cannot display the T-V LINK menu directly by choosing it from a menu.*
- *You cannot transmit the PR channel data to the VCR when a T-V LINK compatible VCR is not connected. Press ▽ to exit the menu.*
- *For details about T-V LINK, refer to page 5.*

2 Turn the VCR on.

3 Press ⊛.



The data transmission begins.
The display disappears once the data transmission ends.

Note:
- *Depending on the type of VCR, the display may change once data transmission ends. In this case, refer to the VCR's manual.*

■ Changing the Country Setting

1 Display the Install menu.
- To return to the Install menu from the Edit menu, press [illegible]mation).

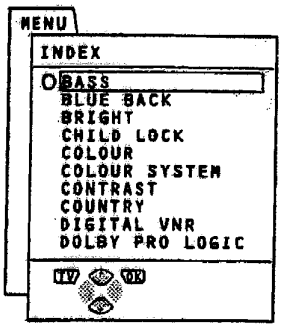
2 Press ▼/▲ to choose AUTO PROGRAM. Then press ⊛.
The Country menu appears.

3 Press ◀/▶/▼/▲ to choose a Country. This completes the setting.

4 Press ▽ to exit the MENU.
- To return to the Install menu, press [illegible] (information).

No.51551
1-15

Index



1 Display MENU.

2 Choose INDEX.

3 Display the Index menu.

The functions in each menu are listed in the Index menu. The required function can be found in the Index menu and the operating menu for that function can be entered with one touch.

1 Press ▼/▲ to choose a function.

If the desired function is not displayed, press ▼/▲ until it appears.

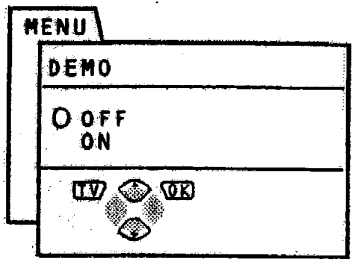
2 Press OK.

The chosen function's operating menu will be displayed.

- To return to the MENU (Main Menu), press 0 (Information).

ENGLISH

Demo



1 Display MENU.

2 Choose DEMO.

3 Display the Demo menu.

You can see the main features of your TV by using the Demo function.

When the Demo is set to ON:
Each time the TV is turned on, the demonstration starts automatically. If you do not want that to happen, set the Demo setting to OFF.

1 Press ▼/▲ to choose ON.

- To cancel the Demo function, choose OFF.

2 Press OK.

The demonstration will start.

To stop the demonstration, press one of the buttons on the remote control.

AV-32WZ4EP
AV-28WZ4EP
AV-28WZ4EPS

Additional Preparation

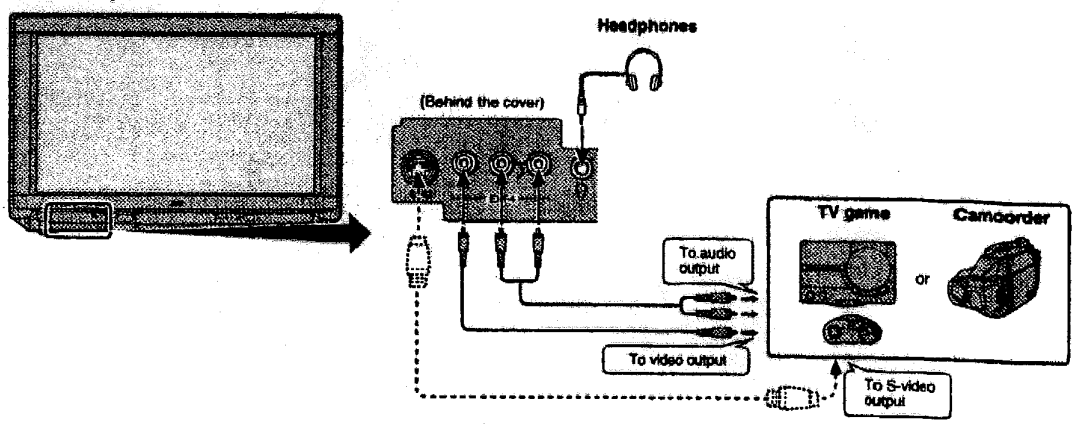
Notes:
- *Use headphones with a stereo mini jack (dia. 3.5 mm).*
- *When using headphones, follow the procedure "Headphone" on page 19.*
- *For further details, refer to manuals provided with the devices you are connecting.*
- *Connecting cables are not supplied.*
- *This TV set has external device connectors to which you can connect external devices. However, there are some differences in functions among them. Consult the table below before making connections.*

■ External terminals specifications

	EXT-1	EXT-2	EXT-3	EXT-4 (front)
VIDEO IN	√	√*1	√*1	√*1
VIDEO OUT	√*2	√*3	–	–
S-VIDEO IN	–	√*1	√*1	√*1
S-VIDEO OUT	–	–	–	–
RGB IN	√	–	–	–
AUDIO-L IN	√	√	√	√
AUDIO-R IN	√	√	√	√
AUDIO-L OUT	√*2	√*3	–	–
AUDIO-R OUT	√*2	√*3	–	–
T-V LINK	–	√	–	–
Others	• Automatic detection and switching of input mode. • Automatic detection and switching of ZOOM mode			

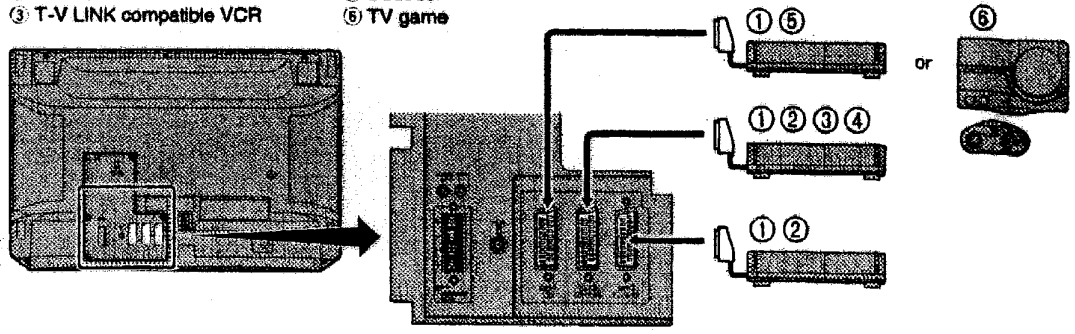
*1 Choose VIDEO or S-VIDEO mode from the EXT Setting menu. For details, see page 22 "EXT Setting".
*2 Only the TV broadcast is output.
*3 TV broadcasts or inputs from other EXT terminals can be output. For details, see page 22 "Dubbing".

■ Front panel connections



■ Rear panel connections

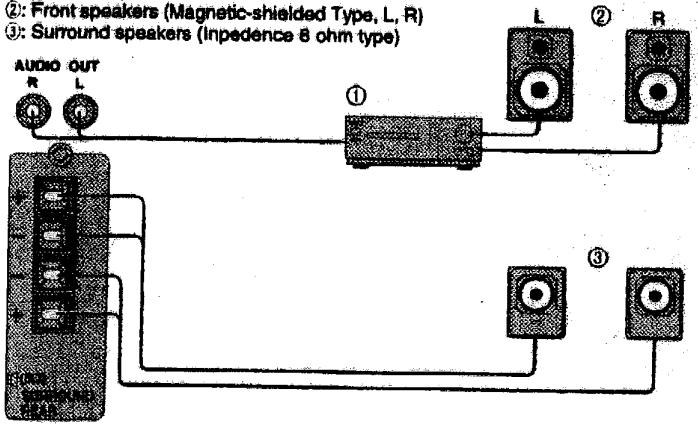
① VCR
② S-VHS VCR
③ T-V LINK compatible VCR
④ T-V LINK compatible S-VHS VCR
⑤ Decoder
⑥ TV game



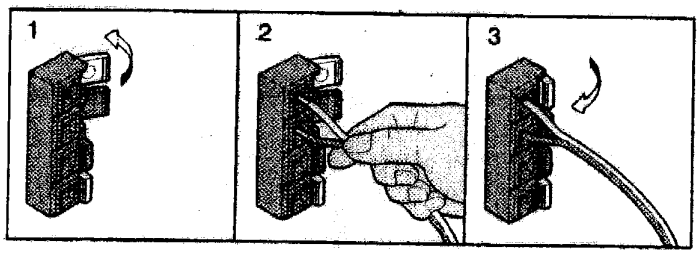
Connecting Speakers

Caution:
Do the following before connecting.
- *Turn the power of all the equipment off.*
- *Set the amplifier volume to low.*
- *Read the manuals provided with the amplifiers and speakers.*

①: Stereo amplifier
②: Front speakers (Magnetic-shielded Type, L, R)
③: Surround speakers (Inpedence 8 ohm type)

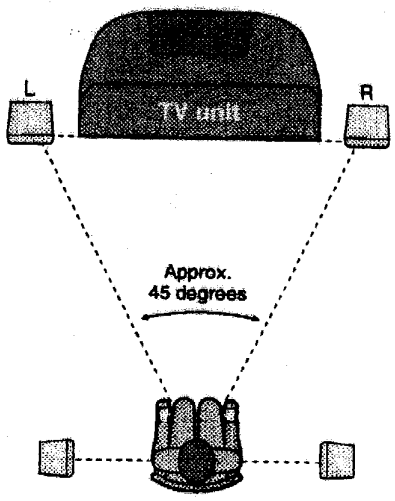


(Terminals on rear)



Notes:
- *Correctly connect the ⊕ speaker terminal to the ⊕ TV terminal, and the ⊖ speaker terminal to the ⊖ TV terminal.*
- *Though there is no L (left) and R (right) distinction for Surround Speakers, make sure that the ⊕ and ⊖ terminals on the speakers and the TV are correctly connected to the corresponding terminals as shown in the figure.*
- *Use the AUDIO OUT terminals for connecting an audio system. The volume output is controlled via the TV and the AUDIO OUT terminal output is not interrupted by headphone connection.*
- *When you want to use your Dolby Surround decoder, connect it to the AUDIO OUT terminals. Then set this TV's surround function to off.*
- *Use impedance 8 ohm type speakers for surround speakers ③.*
- *Use magnetic-shielded speakers for front speakers ② to prevent interference by the TV.*
- *For optimal effect, install the speakers ③ at least 1 metre above the heads of seated viewers.*

■ Positioning the speakers



Connecting Surround Speakers

You can enjoy the Dolby Pro Logic surround sound with two additional surround speakers.

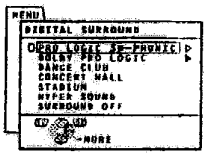
Note:
- *You can connect both your audio system and additional surround speakers. For details, refer to page 33.*

1 Connect the surround speakers ③ to the SURROUND REAR terminal.

2 Turn the TV on.

3 Press OK.
The MENU appears.

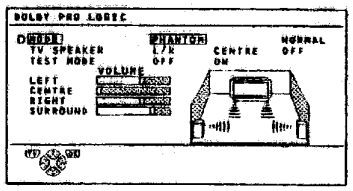
4 Press ▼/▲ to choose DIGITAL SURROUND and then press OK.
The Digital Surround menu appears.



Note:
- *If the Digital Surround does not appear in the MENU, disconnect the headphones from the TV.*

5 Press ▼/▲ to choose DOLBY PRO LOGIC and then press ▶.

The Dolby Pro Logic menu appears.



6 Press ▼/▲ to choose MODE and ◀/▶ to choose PHANTOM.

7 Press ▼/▲ to choose TV SPEAKER and ◀/▶ to choose L/R.

8 Press ▼/▲ to choose TEST MODE and press ◀/▶ to choose ON.
Test signals are output alternately from the speakers.

9 Press ◀/▶ to adjust the level of each speaker so the volume levels match the listening position.

LEFT, RIGHT:
Front speaker L, R

SURROUND:
Surround speakers

Note:
- *When the Phantom mode is set, the volume of the CENTRE cannot be adjusted.*

10 Press OK.
This completes the setting.

Note:
- *The TV SPEAKER setting in the Dolby Pro Logic menu is linked to the other TV speaker setting in the Pro Logic 3D-Phonic menu and Sound Setting menu.*
If you change the one of them, the others will be changed automatically.

Connecting an Audio System

You can use your audio system as front speakers instead of the front speakers on the TV.

Note:
- *You can connect both your audio system and additional surround speakers. For details, refer to page 33.*

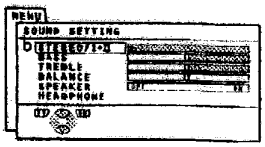
1 Connect your stereo amplifier ① to the AUDIO OUT terminals.

2 Turn the TV on and set the volume to the lowest setting.

3 Press OK.
The MENU appears.

4 Press ▼/▲ to choose SOUND SETTING. Then press OK.

The Sound Setting menu appears.



Note:
- *When "SPEAKER" does not appear in the Sound Setting menu, press ↩ to exit the menu and press ⊡ twice to display "SURROUND OFF". Then, repeat this procedure from step 3.*

5 Press ▼/▲ to choose SPEAKER and press ◀/▶ to choose OFF. Then press OK.

To output sound from the TV speakers:
Set SPEAKER to ON.

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6 Press .
This completes the settings.

7 Turn the stereo amplifier on and re-adjust the volume setting, then press ◀/▶ to adjust the volume.

Notes:
- *Setting the volume of the stereo amplifier too high may damage the speakers.*
- *The SPEAKER setting in the Sound Setting menu is linked to the other TV Speaker setting in the Pro Logic 3D-Phonic menu and the Dolby Pro Logic menu.*
  If you change the one of them, the others will be changed automatically.
- *You can use the TV speakers as the centre speakers when you enjoy the Dolby Pro Logic 3D-Phonic surround sound. This method enhances spoken dialogue. For details, refer to page 20.*

Connecting both Your Audio System and Surround Speakers

When you connect both your audio system and the additional surround speakers, you can enjoy the Dolby Pro Logic Surround sound with four external speakers and also you can use the TV speakers as the centre speakers.

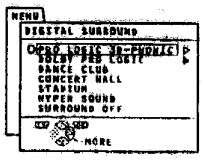
When you do not use the Dolby Pro Logic or Dolby Pro Logic 3D-Phonic function, you can use your audio system as front speakers instead of the front speakers on the TV.

1 Connect your stereo amplifier ① to the AUDIO OUT terminals and connect surround speakers ③ to the SURROUND REAR terminal.

2 Turn the TV on and set the volume to the normal setting.

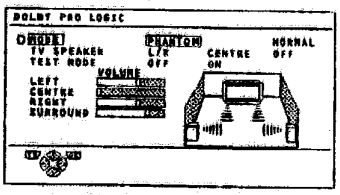
3 Press .
The MENU appears.

4 Press ▼/▲ to choose DIGITAL SURROUND and then press .
The Digital Surround menu appears.



Note:
- *If Digital Surround does not appear in the MENU, disconnect the headphones from the TV.*

5 Press ▼/▲ to choose DOLBY PRO LOGIC and then press ▶.
The DOLBY PRO LOGIC menu appears.



6 Press ▼/▲ to choose an item and ◀/▶ to change the following settings.
Set MODE to NORMAL.
Set TV SPEAKER to CENTRE.
If you do not want to use the TV speakers as the centre speakers:
Set MODE to PHANTOM and TV SPEAKER to OFF.
PHANTOM mode omits the centre speaker.

7 Turn the stereo amplifier on and re-adjust the volume setting.

Note:
- *Setting the volume of the stereo amplifier too high may damage the speakers.*

8 Press ▼/▲ to choose TEST MODE and ◀/▶ to choose ON.
Test signals are output alternately from the speakers.

Note:
- *If the test signal is too faint, adjust the volume of the stereo amplifier. However, setting the volume too high may damage the speakers.*

9 Press ◀/▶ to adjust the level of each speaker so the volume levels match the listening position (the location of the viewer as described by the diagram on page 31).

LEFT, RIGHT:
Front Speaker L, R
CENTRE:
Centre Speaker
SURROUND:
Surround Speakers

Notes:
- *When the Phantom mode is set, the volume of the Centre speaker cannot be adjusted.*
- *If the volume of the speakers does not match after adjusting the volume levels, adjust the volume of the stereo amplifier.*

10 Press .
This completes the settings.

Note:
- *The TV SPEAKER setting in the Dolby Pro Logic menu is linked to the other TV Speaker setting in the Pro Logic 3D-Phonic menu and the Sound Setting menu.*
  If you change the one of them, the others will be changed automatically.

ENGLISH

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AV-28WZ4EPS

Channel Table

- The following table shows the relationship between the displayed CH/CC channel number and the actual channel number.
- The actual channel numbers for the "CC" channel numbers from CC110 to CC161 differ depending on the cable TV station. Check which actual channel numbers correspond to which "CC" channels while referring to the broadcast frequencies which are indicated in the channel tables of each cable TV station. If you can not find the broadcast frequency for a channel, contact the cable TV station.

CH	Channel
CH 02 / CH 202	E2
CH 03 / CH 203	E3, ITALY A
CH 04 / CH 204	E4, ITALY B
CH 05 / CH 205	E5, ITALY D
CH 06 / CH 206	E6, ITALY E
CH 07 / CH 207	E7, ITALY F
CH 08 / CH 208	E8
CH 09 / CH 209	E9, ITALY G
CH 10 / CH 210	E10, ITALY H
CH 11 / CH 211	E11, ITALY H+1
CH 12 / CH 212	E12, ITALY H+2
CH 21 / CH 221	E21
CH 22 / CH 222	E22
CH 23 / CH 223	E23
CH 24 / CH 224	E24
CH 25 / CH 225	E25
CH 26 / CH 226	E26
CH 27 / CH 227	E27
CH 28 / CH 228	E28
CH 29 / CH 229	E29
CH 30 / CH 230	E30
CH 31 / CH 231	E31
CH 32 / CH 232	E32
CH 33 / CH 233	E33
CH 34 / CH 234	E34
CH 35 / CH 235	E35
CH 36 / CH 236	E36
CH 37 / CH 237	E37
CH 38 / CH 238	E38
CH 39 / CH 239	E39

CH	Channel
CH 40 / CH 240	E40
CH 41 / CH 241	E41
CH 42 / CH 242	E42
CH 43 / CH 243	E43
CH 44 / CH 244	E44
CH 45 / CH 245	E45
CH 46 / CH 246	E46
CH 47 / CH 247	E47
CH 48 / CH 248	E48
CH 49 / CH 249	E49
CH 50 / CH 250	E50
CH 51 / CH 251	E51
CH 52 / CH 252	E52
CH 53 / CH 253	E53
CH 54 / CH 254	E54
CH 55 / CH 255	E55
CH 56 / CH 256	E56
CH 57 / CH 257	E57
CH 58 / CH 258	E58
CH 59 / CH 259	E59
CH 60 / CH 260	E60
CH 61 / CH 261	E61
CH 62 / CH 262	E62
CH 63 / CH 263	E63
CH 64 / CH 264	E64
CH 65 / CH 265	E65
CH 66 / CH 266	E66
CH 67 / CH 267	E67
CH 68 / CH 268	E68
CH 69 / CH 269	E69

CC	Channel
CC 01 / CC 201	S1
CC 02 / CC 202	S2
CC 03 / CC 203	S3
CC 04 / CC 204	S4
CC 05 / CC 205	S5
CC 06 / CC 206	S6
CC 07 / CC 207	S7
CC 08 / CC 208	S8
CC 09 / CC 209	S9
CC 10 / CC 210	S10
CC 11 / CC 211	S11
CC 12 / CC 212	S12
CC 13 / CC 213	S13
CC 14 / CC 214	S14
CC 15 / CC 215	S15
CC 16 / CC 216	S16
CC 17 / CC 217	S17
CC 18 / CC 218	S18
CC 19 / CC 219	S19
CC 20 / CC 220	S20
CC 21 / CC 221	S21
CC 22 / CC 222	S22
CC 23 / CC 223	S23
CC 24 / CC 224	S24
CC 25 / CC 225	S25
CC 26 / CC 226	S26
CC 27 / CC 227	S27
CC 28 / CC 228	S28
CC 29 / CC 229	S29
CC 30 / CC 230	S30

CC	Channel
CC 31 / CC 231	S31
CC 32 / CC 232	S32
CC 33 / CC 233	S33
CC 34 / CC 234	S34
CC 35 / CC 235	S35
CC 36 / CC 236	S36
CC 37 / CC 237	S37
CC 38 / CC 238	S38
CC 39 / CC 239	S39
CC 40 / CC 240	S40
CC 41 / CC 241	S41
CC 75 / CC 275	X
CC 76 / CC 276	Y
CC 77 / CC 277	Z, ITALY C
CC 78 / CC 278	Z+1
CC 79 / CC 279	Z+2

CH	Channel
CH 02	F2
CH 03	F3
CH 04	F4
CH 05	F5
CH 06	F6
CH 07	F7
CH 08	F8
CH 09	F9
CH 10	F10
CH 11	F11
CH 12	F12
CH 13	F13
CH 14	F14
CH 15	F15
CH 16	F16
CH 17	F17
CH 18	F18
CH 19	F19
CH 20	F20
CH 21	F21
CH 22	F22
CH 23	F23
CH 24	F24
CH 25	F25
CH 26	F26
CH 27	F27
CH 28	F28
CH 29	F29
CH 30	F30
CH 31	F31
CH 32	F32
CH 33	F33
CH 34	F34
CH 35	F35
CH 36	F36
CH 37	F37
CH 38	F38
CH 39	F39
CH 40	F40

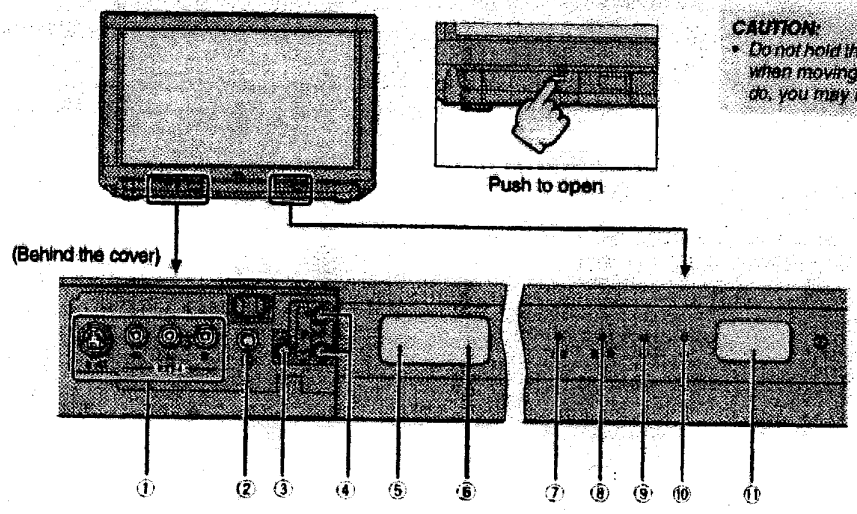
CH	Channel
CH 41	F41
CH 42	F42
CH 43	F43
CH 44	F44
CH 45	F45
CH 46	F46
CH 47	F47
CH 48	F48
CH 49	F49
CH 50	F50
CH 51	F51
CH 52	F52
CH 53	F53
CH 54	F54
CH 55	F55
CH 56	F56
CH 57	F57
CH 58	F58
CH 59	F59
CH 60	F60
CH 61	F61
CH 62	F62
CH 63	F63
CH 64	F64
CH 65	F65
CH 66	F66
CH 67	F67
CH 68	F68
CH 69	F69

CC	Frequency (MHz)
CC 110	118 - 124
CC 111	124 - 132
CC 112	132 - 140
CC 113	140 - 148
CC 114	148 - 156
CC 115	156 - 164
CC 116	164 - 172
CC 123	220 - 228
CC 124	228 - 236
CC 125	236 - 244
CC 126	244 - 252
CC 127	252 - 260
CC 128	260 - 268
CC 129	268 - 276
CC 130	276 - 284
CC 131	284 - 292
CC 132	292 - 300
CC 133	300 - 308
CC 141	308 - 311
CC 142	311 - 319
CC 143	319 - 327
CC 144	327 - 335
CC 145	335 - 343
CC 146	343 - 351
CC 147	351 - 359
CC 148	359 - 367
CC 149	367 - 375
CC 150	375 - 383

CC	Frequency (MHz)
CC 151	383 - 391
CC 152	391 - 399
CC 153	399 - 407
CC 154	407 - 415
CC 155	415 - 423
CC 156	423 - 431
CC 157	431 - 439
CC 158	439 - 447
CC 159	447 - 455
CC 160	455 - 463
CC 161	463 - 469

TV Buttons and Parts

Front Panel

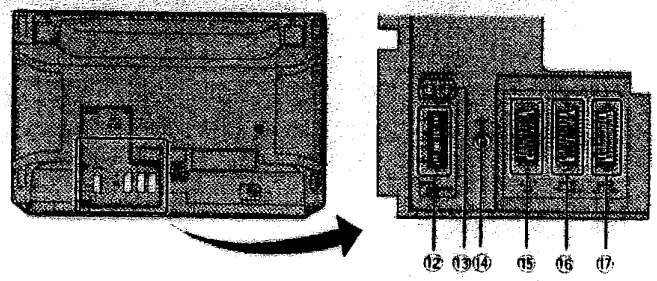


CAUTION:
- *Do not hold the front panel cover when moving the TV set. If you do, you may break it.*

① EXT-4 terminals	pages 22, 30
② Headphone jack (mini jack)	pages 19, 21, 30
③ ◿ (Volume) button	page 7
④ P V/Λ buttons / ◿ −/+ buttons	page 7
⑤ Remote control sensor	
⑥ ECO sensor	

⑦ 3D lamp	pages 10, 19, 21
⑧ ECO lamp	page 15
⑨ Sleep timer lamp	page 23
⑩ Power lamp	pages 3, 6
⑪ Main power button	pages 3, 6

Rear Panel



⑫ SURROUND REAR terminal	page 31
⑬ AUDIO OUT terminal	page 31
⑭ Aerial socket	page 2

⑮ EXT-1 terminal	pages 2, 22, 30
⑯ EXT-2 terminal	pages 2, 5, 22, 30
⑰ EXT-3 terminal	pages 22, 30

Troubleshooting

- If the plug is disconnected from the AC socket, or the TV aerial has problems, you may think there is a problem with the TV itself. Be sure to check the following before calling for service.

IMPORTANT

- Review all instructions in this manual

	Problem	Action
■ GENERAL	The TV cannot be turned on.	• Insert the plug in an AC socket. • Turn the main power on. (See page 6.)
	No picture or sound.	• Check aerial connections. (See page 2.) • Choose the correct input mode. (See page 7.) • Choose the correct colour system manually. (See page 16.)
	The TV shuts off automatically.	• Did you set the Sleep Timer? (See page 23.)
	Inoperable remote control.	• Replace the batteries. (See page 2.) • Insert the batteries correctly. (See page 2.) • Use the remote control within about 7 metres of the TV.
	MENU can not be displayed.	• Are you watching the Teletext screen? None of the Menu operations are possible when viewing a teletext programme. Perform the Menu operation in the TV mode.
■ PICTURE	Poor colour.	• Adjust COLOUR and BRIGHT. (See page 15.) • Choose the correct colour system manually. (See page 16.)
	The ZOOM mode suddenly changes.	• The AUTO mode is working. (See page 9.)
	The picture is tilted .	• Correct the tilted picture. (See page 17.)
	Lines or streaks in picture (interference).	• Move the components apart until the interference is eliminated. • Reposition the aerial.
	Spots (crosstalk).	• Reposition the aerial. • Replace with an aerial with better directionality.
	Double pictures (ghosts).	• Reposition the aerial. • Replace with an aerial with better directionality.
	Snowy pictures (noise).	• Check aerial connections. • Redirect the aerial. • Replace or repair the aerial.

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1-19

	Problem	Action
■ SOUND	The screen turns blue.	• Is the Blue Back function set to ON? (See page 23.)
	No sound from the TV's speakers.	• Disconnect the headphones. • If you want to have sound come from both the TV's speaker and headphones. See page 19. • Set SPEAKER to ON. (See page 18.)
	The headphone volume level cannot be adjusted.	• It cannot be adjusted with the ◀/▶ buttons or (volume) –/+ buttons. Adjust it with the VOLUME function in the HEADPHONE menu. (See page 19.)
	The sound from the TV does not stop even if the headphones are connected.	• TV SPEAKER in the HEADPHONE menu is set to ON. Change the setting to OFF. (See page 19.)
	No stereo sound.	• Change STEREO/I•II to CD mode. (See page 18.) • Is TV SPEAKER on the Pro Logic 3D-Phonic menu or Dolby Pro Logic menu set to CENTRE? Change the TV SPEAKER setting to L/R. (See pages 20 and 32.)
	No "SUB-I" or "SUB-II" sound in a multi-sound broadcast.	• Change STEREO/I•II to the correct mode. (See page 18.)
	Surround function does not function properly.	• Dolby Pro Logic Surround and Pro Logic 3D-Phonic work properly only with Dolby Surround encoded programmes. • Functions other than Hyper Sound and the Headphone surround functions work properly only with stereo programmes. • Hyper Sound works properly only with mono programmes.
■ TELETEXT	No teletext reception.	• Tune to a channel that has teletext. (See page 12.) • Videotaping teletext is not recommended as it may not record correctly.
	The current time is not displayed.	• Tune to a channel that has teletext. (See page 12.)

The following are normal and are NOT malfunctions:

- When touching the picture tube surface, you might feel a slight charge of static electricity. This is because the picture tube contains static electricity; it does not affect the human body.
- The TV may emit a crackling sound due to a sudden change in temperature. There is no problem unless the picture or sound is abnormal.
- When a still, bright image (of a white dress, for example) appears on the screen, the image may be coloured. This problem occurs in all picture tubes, and as the bright image disappears, the colour also disappears.
- This TV is equipped with a microcomputer that may operate abnormally due to interference from external components. If this happens, turn off the main power and disconnect the power cord from the AC socket. Then reconnect the power cord to AC socket and turn on the main power again.

Specifications

Item \ Model	AV-32WZ4EP	AV-28WZ4EP / AV-28WZ4EPS
TV RF systems	CCIR B/G, I, L	
Colour systems	PAL, SECAM (NTSC 3.58 / 4.43 MHz only in EXT modes)	
Channels and frequencies	E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, A-H, H+1, H+2, F2 – F10, F21 – F69 • French cable TV channel of broadcast frequencies 116 – 172 MHz and 220 – 469 MHz	
Sound-multiplex systems	A2 (B/G)/NICAM (B/G, L) system	
Teletext systems	Fastext (United Kingdom system) / TOP (German system) / WST (standard system)	
Power requirements	AC 220 – 240 V, 50 Hz	
Power consumption	Maximum 249 W, Average 145 W, Standby 1.2 W	Maximum 242 W, Average 138 W, Standby 1.2 W
Picture tube size	Visible area 76 cm (measured diagonally)	Visible area 66 cm (measured diagonally)
Audio output	Rated Power output: 20 W + 20 W	
Speakers	10 cm round × 2, 3.5 cm round × 2	
External input / output	EXT-1, EXT-2, EXT-3 — 21-pin Euroconnector (SCART)	
	EXT-4 — VIDEO IN (RCA) AUDIO L / R IN (RCA) S-VIDEO IN (Mini Din 4-pin)	
	AUDIO OUT — (Variable out (0-1 Vrms), low impedance) FRONT L/R output (RCA)	
	SURROUND REAR — Speaker terminals for external surround speakers (Impedance 8 ohm) only. Rated power output: 7.5 W + 7.5W	
	Headphone jack (stereo mini jack, dia. 3.5 mm)	
Dimensions (W × H × D)	805 mm × 550 mm × 550 mm	716 mm × 489 mm × 496 mm
Weight	49.8 kg	36.3 kg
Accessories	Remote control unit RM-C793 × 1 AAA (R03) dry cell battery × 2	

Design and specifications subject to change without notice.

Pictures displayed on the screen using this TV's image-processing functions should not be shown for any commercial or demonstration purpose in public places (tearooms and halls in hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

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